



These positions are shown in the figure which is the adopted apparent ellipse, from which the following elements for the true ellipse have been computed :—

$\tau = 1892.0$	$\Omega = 109^{\circ} 12'$
$\mu = 180 \text{ years}$	$\lambda \quad 18 \quad 7$
$\epsilon = 0.70$	$\gamma \quad 58 \quad 9$
$\alpha = 0''.71$	$\phi \quad 42^{\circ} 88$

The measures of H. Struve were received after this paper was written. They uphold the binarity and conclusions here given in the most decided manner.

1901 December 28.

Observations of the Satellite of Neptune from Photographs taken at the Royal Observatory, Greenwich, in 1899–1900.

(Communicated by the Astronomer Royal.)

By inadvertence the publication of these results for the opposition of 1899–1900 has been delayed till now.

The photographs were taken with the 26-inch refractor of the Thompson equatorial. An occulting shutter immediately in front of the plate has been used to screen the planet during the greater part of the long exposure on the satellite, a series of very short exposures (usually twenty of one second each) being given to

Q

Neptune at regular intervals (usually each minute) by lifting the occulting arm. The orientation was determined usually by means of a pair of short-exposure images of *Neptune*, the clock being put out of gear for seven seconds between the exposures to give a convenient displacement in R.A. The photographs were measured in reversed positions of the plate by each of two observers. The mean values of position angle and distance as measured are given in the following table, the tabular positions being computed from the data given in the *Connaissance des Temps*, based on Mr. H. Struve's elements, the eccentricity of the orbit being neglected owing to the uncertainty as to the present position of the periastron.

Positions of Neptune's Satellite measured on Photographs taken with the 26-inch Refractor.

Date.		Exposures.		Position angle.			Distance.			
				Observed.	Tabular.	Tab.—Obs.	Observed.	Tabular.	Tab.—Obs.	
1899.										
	d	h	m	m	s.					
Sept.	28	12	40	30 & 15		53°09	51°95	—1°14	14"37	14"41 + 0"04
Oct.	10	12	3	30 & 20		42°67	39°57	—3°10	12°81	13°12 + 0°31
	12	12	11	30 & 10		261°23	261°88	+ 0°65	16°74	16°56 — 0°18
	16	11	40	30 & 10		32°27	32°55	+ 0°28	12°90	12°46 — 0°44
1900.										
Jan.	17	10	2	20 & 10		(80°52)	83°08	(+ 2°56)
	18	8	58	20 & 20		42°34	41°73	— 0°61	14°45	13°81 — 0°64
	24	10	45	30 & 20		28°55	29°33	+ 0°78	12°35	12°49 + 0°14

October 10. Image of planet elongated. January 17. Planet on edge of shutter.

*Observations of Occultations of Stars by the Moon and Phenomena of Jupiter's Satellites,
made at the Royal Observatory, Greenwich, in the Year 1901.*

(Communicated by the Astronomer-Royal.)

Day.	Phenomenon.	Telescope.	Power.	Moon's Limb.	Mean Solar Time of Observation. h m s	Observer.
1901. March 26	Disapp. 68 Orionis	Astrographic Equat.	225	Dark	9 13 58.04	W.
April 22	" Lalande 11088	Great Equat. (Corbett)	100	"	9 25 20.88	H. F.
22 (a) (b)	" χ^2 Orionis	Astrographic Equat.	225	"	10 25 0.03	R.
23 (a)	" W. B. (2) VI. 1200	Old Altazimuth	100	"	8 5 54.76	A. C.
23 (a)	" "	Sheepshanks Equat.	55	"	8 5 54.85	W. B.
23	" "	Astrographic Equat.	225	"	8 5 54.57	S.
23	Reapp. "	Sheepshanks Equat.	55	Bright	8 23 59.51	W. B.
28 (b)	Disapp. p^2 Leonis	Great Equat.	670	Dark	10 42 18.68	B.
May 31	" Piazzi XV. 96	Sheepshanks Equat.	120	"	11 48 44.94	A. C.
June 4	Reapp. Lalande 35497	" "	120	"	12 41 47.97	B.
29	Disapp. Lalande 30725	Astrographic Equat.	225	"	8 45 47.44	H.
July 28 (b)	" 21 Sagittarii	" "	225	"	9 50 35.54	R.
Aug. 24 (c)	" Piazzi XVII. 323	" "	225	"	8 46 48.78	G. B.
Oct. 22 (d)	" c^1 Capricorni	" "	225	"	No Occultation	A. C., R.
23 (b) (c)	" κ Aquarii	Great Equat.	670	"	8 52 47.81	B.
27 (e)	" 29 Arietis	Astrographic Equat.	225	Bright	12 14 58.90	H.
27 (f)	Reapp. "	" "	225	App. Bright	13 7 24.02	H.